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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,982	03/12/2001	Stefan Karl	1200.473	6932

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02/14/2002

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EXAMINER

FORD, JOHN K

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 02/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

SD 10

Office Action Summary	Application No.	Applicant(s)	
	09/802,982	Karl	
	Examiner	Art Unit	
	Ford	3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12-20-01
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to, provided 35 USC 112, 2nd ¶ problems are satisfactorily addressed.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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Prior art documents which correspond to the systems described in the "Background of the Invention" portion of the specification are required in response to the is action. Many highly relevant patents "X" (35 USC 102(b) references) namely DE '654 and FR '867 have been provided without translation. The Examiner has not made rejections on these because he doesn't understand them. Please provide translations to facilitate examination. Most of the prior art discussed there have no document numbers associated with them, so it will be necessary to contact the inventor, Mr. Karl, to determine whether documents showing these prior art systems exist. In the absence of documents, carefully drawn sketches with enough detail to permit a meaningful comparison to what is claimed here will be sufficient.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Most of the components claimed in claim 12 find no antecedent basis in claim 1 in their operative relationship. Claim 12 reads like a laundry list of refrigeration parts.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

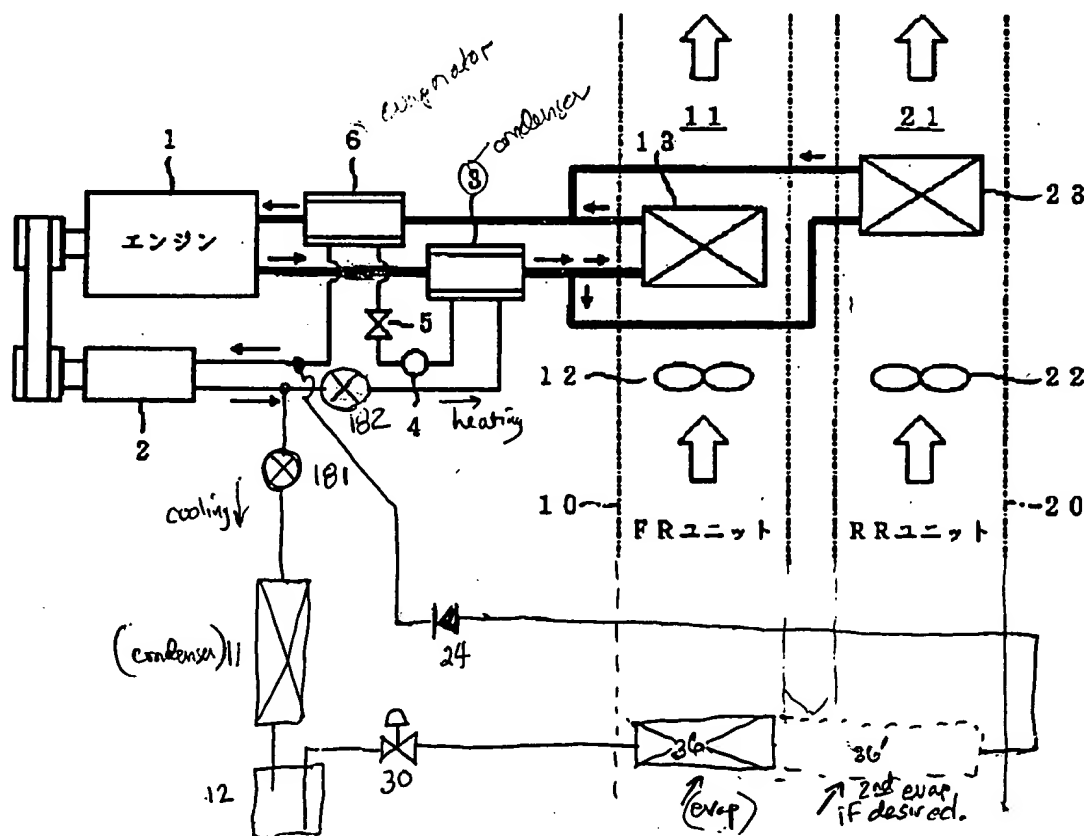
Claims 1, 2, 10, 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JA 10-76837 in view of Enomoto Figure 8, and the description thereof.

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JA '837 shows a refrigerant system for beneficially increasing the heating effect of a liquid based heating system. It has no ability to cool the compartment in hot weather. The compressor 2 is known to be the most costly component of automotive refrigerant systems.

Enomoto teaches in Figure 8 a refrigerant based heater circuit (182, 13, 37, 15~~6~~) and a refrigerant based cooler circuit (181, 11, 12, 30, 36 and 24) connected in parallel across the output and inputs of the compressor 10.

To have added a refrigerant based cooler circuit (as described above) to JA '837 to give the capability of cooling in the summer as well as heating in the winter would have been obvious to one of ordinary skill in climates ^{where} ~~were~~ air conditioning was needed to preserve occupant comfort. Appropriate valves (181, 182) on the discharge side of the compressor would be necessary to separately activate the heating and cooling systems. The modification is shown below.



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Regarding claim 10, see element 24 in the sketch. Regarding claim 11, see elements 5 and 30.

Regarding claims 13 and 14, note Enomoto shows an internal combustion engine and discloses as a substitute an electric motor (col. 5, last line).

To have used the JA '837/Enomoto system in an electric car or gasoline powered car would have been obvious given the general acceptance of both *by the general public*.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Echigoya et al.

To have used a conventional suction line accumulator such as disclosed by Echigoya at 66 in the prior art to prevent the compressor from ingesting liquid refrigerant and then breaking would have been obvious to one of ordinary skill in the art.

Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Whalen or Momose (JA '134).

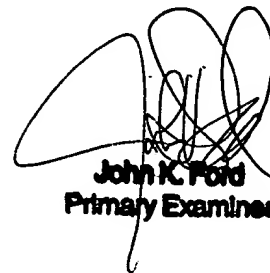
Whalen teaches by-passes 64 and 66 around a chiller 10 and heater 12 controlled by valves 58 and 56. Similarly Momose Fig. 1 shows a heat pump circuit (1, 2, 3 and 4) and external fluid bypasses in loops 6 and 9.

In both Whalen and Momose the bypass of the external fluid permits more accurate control of its temperature. To have added such ^{coolant} by-passes around heat exchangers 6 and 3 of JP 10-76837/^{Enomoto} to permit accurate control of fluid ^(coolant) temperatures in the coolant loop (i.e. to prevent the engine coolant from [^]getting too cold or too hot) would have been obvious to one of ordinary skill.

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Claim 12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Any inquiry concerning this communication should be directed to John Ford at telephone number (703) 308-2636.



John K. Ford
Primary Examiner

J. Ford

January 28, 2002